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# **AIA RFID Data Exchange Guideline Status**

**AIA / Electronics Enterprise Integration  
Committee**  
**May 10, 2005**



# AIA/EEIC - RFID Data Exchange Guideline Project

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**Issue:** All DoD prime contractors are required to supply specified RFID data elements to the DoD for all shipped items that meet the criteria as required in DFARS 252.211-7006. To satisfy the DoD requirements, Primes may need to electronically receive RFID data from suppliers and partners. A common solution set defining the exchange RFID data between partners and primes is critical to the Primes' ability to deliver and maintain accurate RFID data while keeping costs down in the supply chain.

**Scope:** Provide a common set of data exchange formats and methods from which each Partner/Prime pair can select the options that meet his/her technical capabilities.

**Deliverable:** "Industry Guideline" for implementing Partner to Prime data exchange formats and methods.  
Expected 2<sup>rd</sup>. Qtr 2006.

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**Target Audience:** All contractors, primes and suppliers as trading partners.

**When to Use:** Whenever partners need to satisfy the prime's RFID data requirements identified in the purchase order for a RFID tagged shipment.

**Benefits:** Use of this Industry wide Best Practice will facilitate, simplify, and reduce the cost of compliance with Prime RFID requirements by:

- Minimizing the number of data formats and data exchange methods required for partners to support. We have identified four data formats: Microsoft Excel, Flat File (ASCII text), ANSI X12 4010, and XML; and four Data Exchange Methods: Email, FTP, EDI, and Web Portal.
- Limiting the number of interfaces needed by primes and partners from their legacy systems, which would otherwise have been needed to support these data exchanges in an environment where a common industry guideline did not exist.

# AIA RFID Data Exchange Guideline Project Tasks

1. Data Formats and Exchange Methods based on Industry Input.

2. Industry Guideline Highlights:

- RFID Data Exchange Guideline structures similar to UID Data Exchange Guideline.
- Data Exchange Formats Data Exchange Methods

Email, FTP, Web Portal, X12

XML, Flat file, Excel, EDI

3. Release Draft to Industry for Review and Comment.

4. Release final guideline to Industry after AIA/eBSG approval.

5. Publicize UID Industry Guideline Availability to Industry

Flat File, Excel,

XML

FTP, EDI,

Web Portal

Supplier

Partner

Email, FTP,  
EDI, Portal

Prime

Requires use of WAWF FTP or  
EDI data formats also  
available is manual data entry  
using Web Portal.



Facilitated by use of AIA data  
exchange formats and delivery  
methods identified in this  
guideline document.

# Skill Level and Requirements Driven Options Used



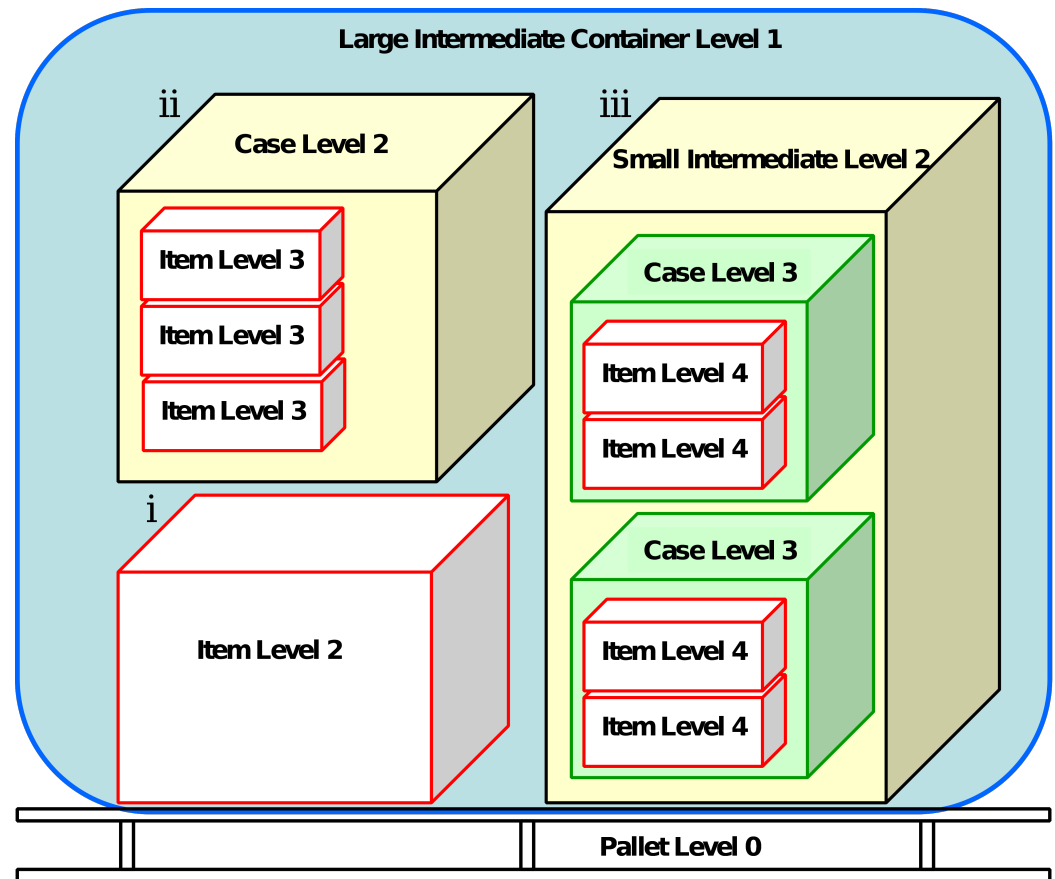
Data Format	When Used	Skill Level
Microsoft Excel Template	<ol style="list-style-type: none"><li>Where requirements to support RFID are low.</li><li>In the interim to meet RFID data deliverable requirements while a more sophisticated approach is developed.</li></ol>	Low
User Defined Format or (Flat File)	<ol style="list-style-type: none"><li>Created as a simple output interface from COTS packages like Microsoft Access.</li><li>As an output format generated from any legacy application.</li></ol>	Moderate
XML Schema	<ol style="list-style-type: none"><li>As an output format generated from any legacy application.</li><li>As an output format available from many database query tools.</li></ol>	Advanced
ANSI X12	<ol style="list-style-type: none"><li>As an output format generated from any legacy application.</li><li>Required use of the AIA 856 Ship Notice / Manifest Version 005 - Release 010 Implementation Convention.</li></ol>	Advanced

Transmission Methods	When Used	Skill Level
Email (SMTP)	<ol style="list-style-type: none"><li>All trading partners can support email. The selected data format file is attached to the email and sent to the email address supplied by each prime.</li></ol>	Low
FTP (File Transfer Protocol)	<ol style="list-style-type: none"><li>This is a cost free transfer method that can be used to transfer any of the data formats to a location provided by the prime. The setup cost is minimal. User Id and password must be supplied by the prime.</li></ol>	Moderate
Web Portal	<ol style="list-style-type: none"><li>This is only available when the prime has a Web Portal application. Each prime must provide instructions for logging into and uploading/downloading data files.</li></ol>	Moderate
EDI	<ol style="list-style-type: none"><li>This requires the use of ANSI X12 transactions and may or may not require the use of a 3<sup>rd</sup> party Value Added Network or VAN. Use of 3<sup>rd</sup> party VAN will involve additional costs.</li><li>This method will likely only be used by those partners who are already exchanging data using this method.</li></ol>	Advanced

# Training and Examples

## Understanding RFID Levels

- a. One RFID Record is generated for each RFID Tag.
- b. One RFID Tag is required per each level of packaging (e.g., Item Package / Case Package / Small Intermediate Container / Large Intermediate Container / Pallet) included in the shipment.
- c. Up to 5 levels of packaging may be supported [Coding: 0, 1 thru 4, where 0 = Highest (e.g., Pallet) thru 4 = Lowest (e.g., Item Package) in the shipment]. This corresponds to DoD RFID requirements.



## Examples:

- i. Example 1, if two levels are needed - 0 = Shipping Container, 1 = Item.
- ii. Example 2, if three levels are needed - 0 = Pallet, 1 = Case, 2 = Item.
- iii. Example 3, if five levels are needed - 0 = Pallet, 1 = Large Intermediate Container (stacked on the Pallet), 2 = Small Intermediate Container (packed within the Large Intermediate Container), 3 = Case (packed within the Small Intermediate Container), and 4 = Item (packed within the Case).

# Flat File Specification and Data Dictionary



Data Elements	Format	Min/ Max	Industry Req	Industry Description	Additional Industry Guidelines
A - Alpha Character Only, AN - Alpha Numeric, Nv - Numeric Only (v = number of decimals), R - Real Number, DT - Date CCYY-MM-DD					
M - Mandatory, C - Conditional, O - Optional					
<b>Header Record - Mandatory</b>					
Must be the first record in every file. Must be one and only one per file.					
RecordType	A	1/1	M	Always "H" - Header	
RecordNumber	N0	3/3	M	Always "000"	
TransactionType	A	4/4	M	Always "RFID"	
Email	AN	1/60	M	Email address of the person or office listed in Name.	
Name	AN	1/120	M	Person or office that would be contacted if there were technical issues associated with the file.	
Organization	AN AN N0	5/5 6/6 9/9	M	The 5 character CAGE, 6 character DoDAAC, or 9 digit DUNS of the organization providing the file.	
Phone	AN	1/25	M	Phone number of the person or office listed in Name.	
Version	AN	3/6	M	Always "1.0"	
IndustryFlag	AN	1/1	M	Always "Y"	
PartnerCompanyName	AN	60	O	Company name of the Partner sending this transaction	This field is optional unless the Prime requests it.

# Where We Are Today, May 10, 2006

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- **Draft guideline package was released to all 200 AIA member companies for review and comment. All feedback was positive.**
- **The Industry RFID Guideline package is complete and was approved by the AIA/eBSG (eBusiness Steering Group) for release.**
- **The final package was submitted to AIA for release to Industry on April 26, 2006.**
- **The (entire) RFID Industry Guideline package will be posted to the AIA Web-site, on the public side, where it will be available for downloading. All needing parties will have free access.**
- **AIA will publish the availability of the IUID Industry Guideline in various newsletters (via all means available to them) and contact other Industry groups. We hope (expect) that other industry groups (to) will do the same.**





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# Questions ?

## **Additional Information:**

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